

Notice of Allowability

Application No.

10/784,227

Examiner

BJ Forman

Applicant(s)

YAMAMOTO ET AL.

Art Unit

1634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to papers of 17 November 2006 and interview of 9 February 2007.
2. ☒ The allowed claim(s) is/are 4 and 5.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/797,918.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

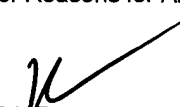
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |


BJ Forman
Primary Examiner
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NOTICE OF ALLOWANCE

Status of the Claims

This action is in response to papers filed 17 November 2006 in which claims 4-5 were amended. This action is further in response to amendments discussed and agreed upon during an interview between the examiner and applicant's representative on 9 February 2007.

The previous rejections are withdrawn in view of the amendments. The amendments define the claims over the prior art and place the claims in condition for allowance.

Claims 4-5 are allowed.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jennifer Teng on 9 February 2007.

The application has been amended as follows:

Change the title to the following:

A METHOD FOR CORRECTING INTER-PIN SPOTTING AMOUNT ERROR FOR A MICROARRAY

Replace Claim 4 with the following:

Claim 4: A method for correcting inter-pin spotting amount errors of a microarray produced by repeating an operation of simultaneously spotting a plurality of groups of samples on a

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support by using a spotting device provided with a plurality of pins, the method comprising the steps of:

a) simultaneously spotting an identical sample onto a group of control spots on the support containing inter-group spotting amount errors with all of the pins of the spotting device in a predetermined positional relationship, where a plurality of samples are spotted on the support with the spotting device;

b) measuring spotting amounts in the control spots spotted with respective pins of the spotting device to obtain correction parameters for said inter-pin spotting amount errors;

c) having the plurality of pins of the spotting device capture different samples and simultaneously spotting the different samples captured by the plurality of pins of the spotting device to provide another group of sample spots on the support in the same predetermined positional relationship with each other as said group of control spots thereby containing said inter-group spotting amount errors;

d) repeating step (c) to produce a microarray; and

e) correcting said inter-pin spotting amount error of each sample spot of said plurality of groups on the support by using the obtained correction parameters.

Replace Claim 5 with the following:

Claim 5: A method for correcting inter-pin spotting amount errors of a microarray according to claim 4, further comprising corresponding the pins used for spotting samples to sample spot locations on the microarray by positional information of wells on well plates, which store the samples transferred to the microarray.

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Replace the Abstract with the following:

Abstract

The present invention has an objective of obtaining more accurate data of microarray experiments by correcting an inter-pin spotting amount error caused upon microarray production using a plurality of pins. Upon microarray production, samples are immobilized on a microarray support using all pins as controls for correcting the inter-pin spotting amount errors. After the microarray experiments, luminescent intensities of the samples used as control spots for correcting the inter-pin spotting amount errors are measured and used to obtain correction parameters for the inter-pin spotting amount errors of respective pins. These parameters are used to correct luminescent intensities of other samples.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The claims are drawn to correction of inter-pin spotting errors. The claims using a spotting head having a plurality of pins to spot a group of control spots. The amount deposited in each spot is measured to determine the effectiveness of each pin for spotting. The measurement is used as a normalization for analyzing all subsequent deposition thereby correction for inter-pin spotting. The prior art does not teach or suggest the claimed error correction.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

Claims 4-5 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BJ Forman whose telephone number is (571) 272-0741. The examiner can normally be reached on 6:00 TO 3:30.

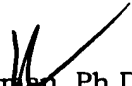
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on (571) 272-0735. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.


BJ Forman, Ph.D.
Primary Examiner
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February 12, 2007